

Staffan Bolminger
Environmental manager



Älvstranden Utveckling AB

Development company owned by the city of Gothenburg

Summary of owner instructions:

- Sustainable growth
- Ecological, social and economical dimensions
- Exchange experiences nationally and internationally

Ambitious environmental and energy strategy



ONE PLANET LIFE!



Eriksberg in early 80ies





Eriksberg 2012



Gothenburg in 1973



Eriksberg 1989



Eriksberg 1992



Eriksberg last week



More than 70% remains!



**We will add
30 000 residents and
40 000 workplaces**





Kvillebäcken



Lindholmshamnen





Bjurslotts-
skolan

Långängen

Vågmästarplatsen

Kvilletorget

Porslinsfabriks-
tomten

Nya Swedenborgsgatan

Färgfabriksgatan

Rundbäcksgatan

Gustaf Dalensgatan

Gamla Tuvevägen

Kvillebäcken

Hjalmar Brantingsgatan

Hjalmar
Brantingsplatsen

Backaplan

Swedenborgsgatan

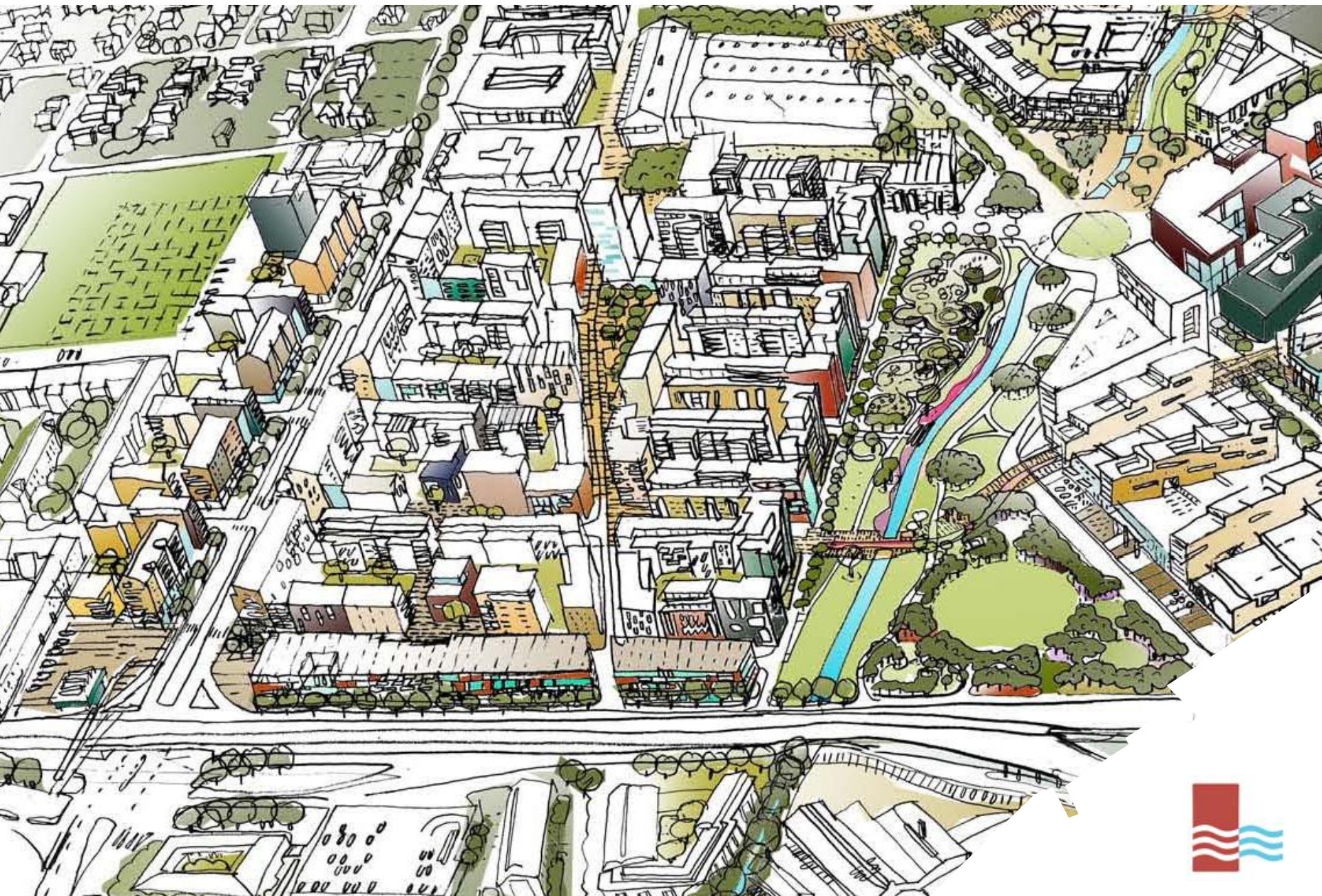
Deltavägen



Kvillebäcken 2008

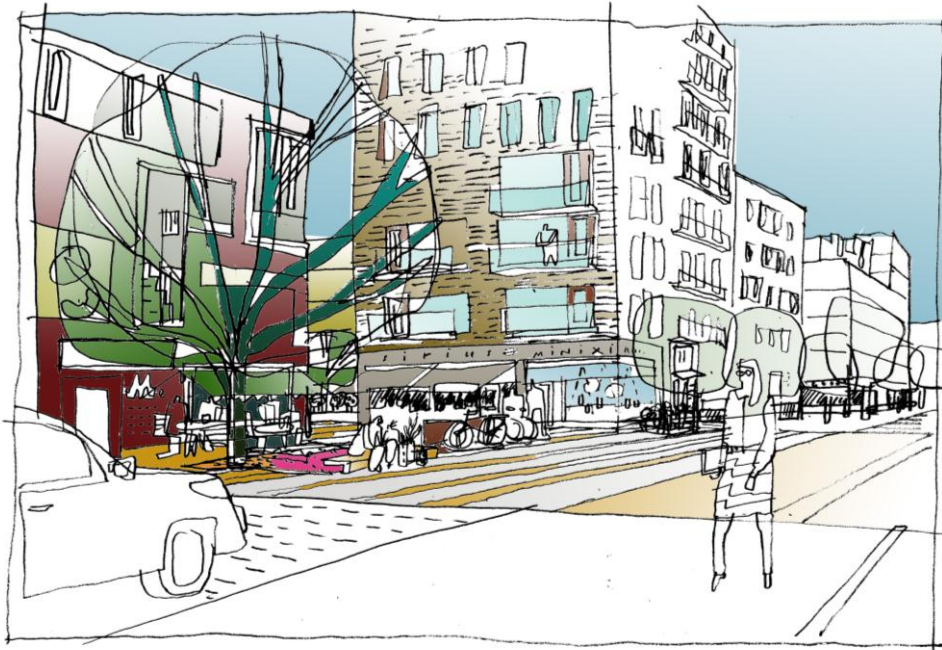


Kvillebäcken 2018





KVILLEBÄCKEN

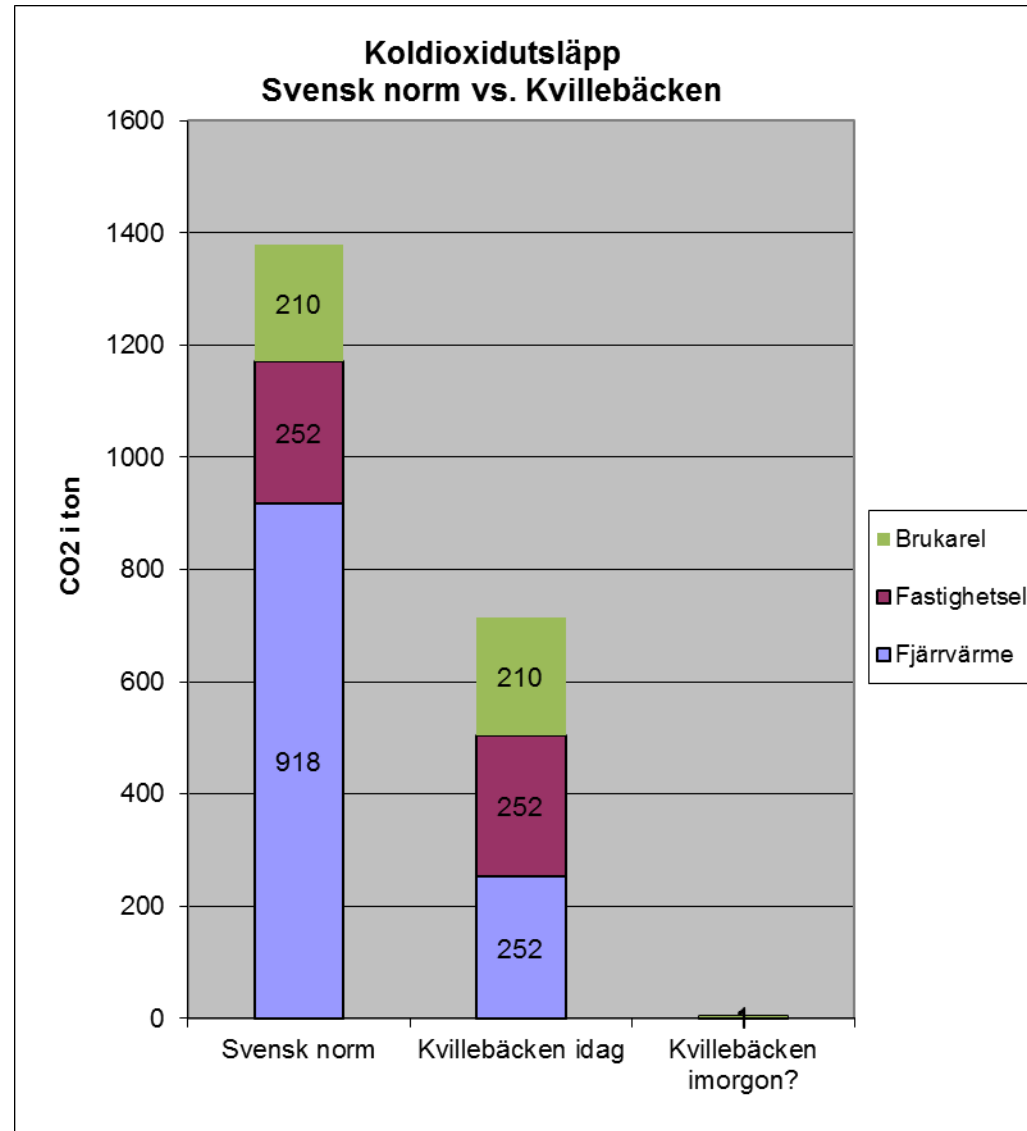


- 2011-2018
- 2 000 apartment
- 25.000 m² restaurants, office, service etc
- 7 companies in a consortium



CO₂ emissions from 2000 dwellings in Kvillebäcken

1. Swedish standard (90kWh/m², year)
2. Kvillebäcken today (60kWh/m², year)
3. Kvillebäcken tomorrow





Step by step towards energy efficient housing

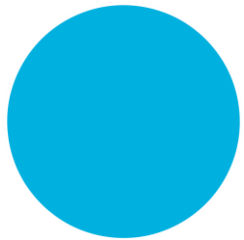


2004 Parkhuset, 109 kWh/m², year
2006 Höghuset, 99 kWh/m², year
2008 Hamnhuset, 59 kWh/m², year



ÄLVSTRANDSMODELLEN

Urban development through collaboration



An area needs to be developed



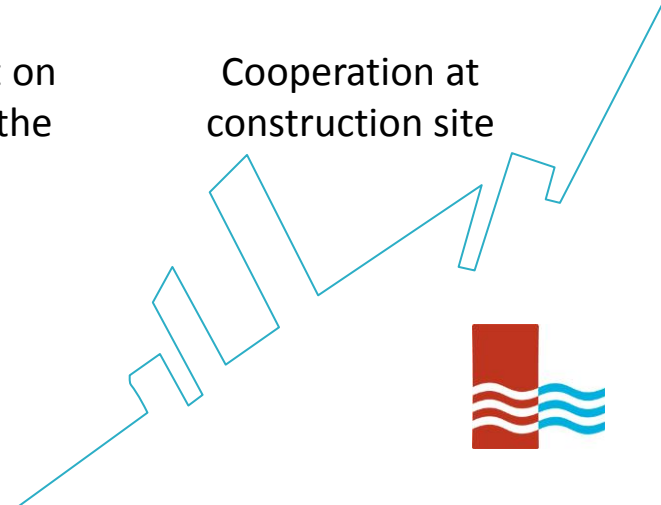
Cooperation for holistic approach



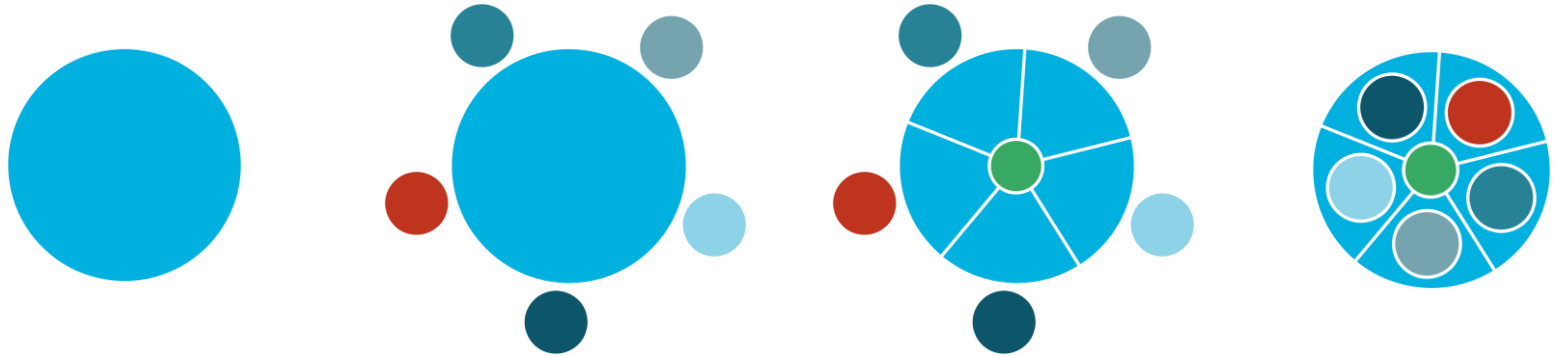
Agreement on pricing of the plots



Cooperation at construction site



Documents supporting sustainability



Invitation

Common vision

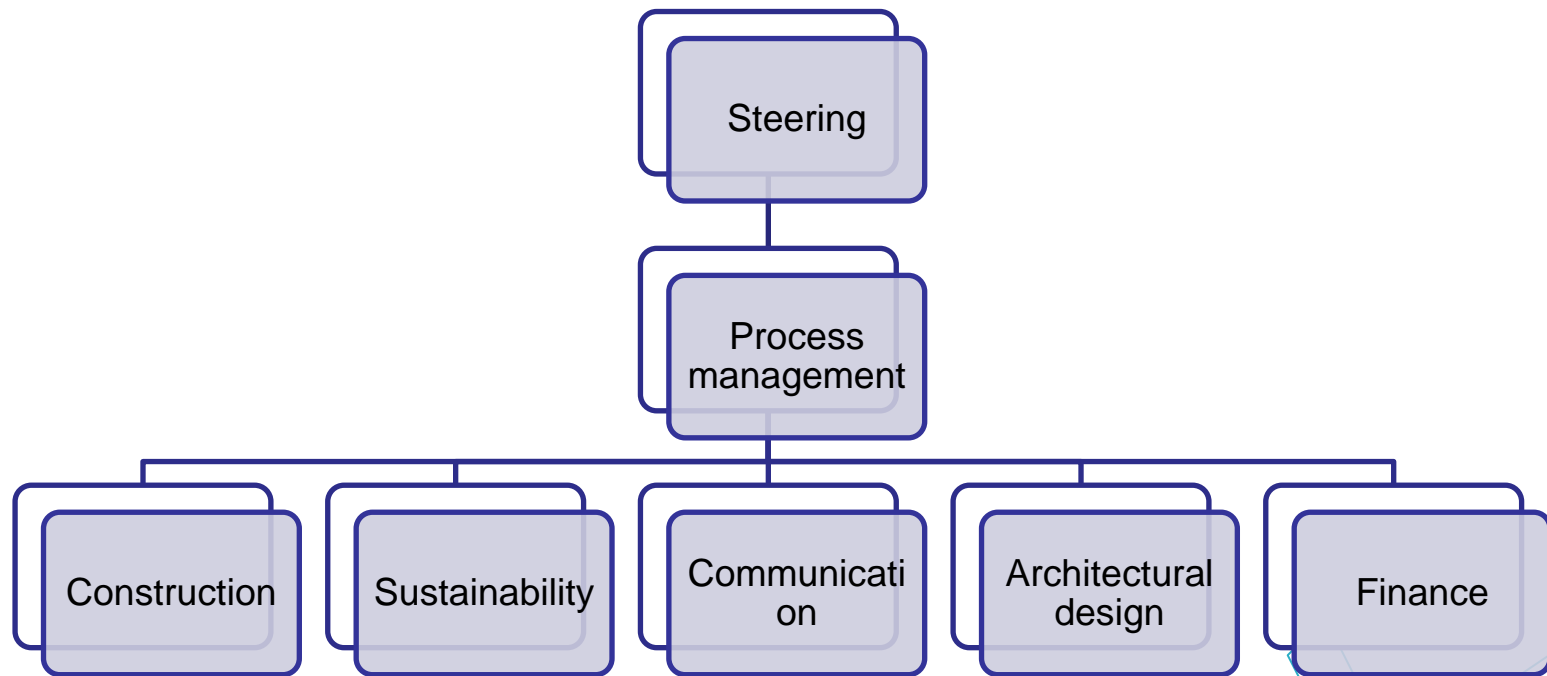
Program for Sustainability

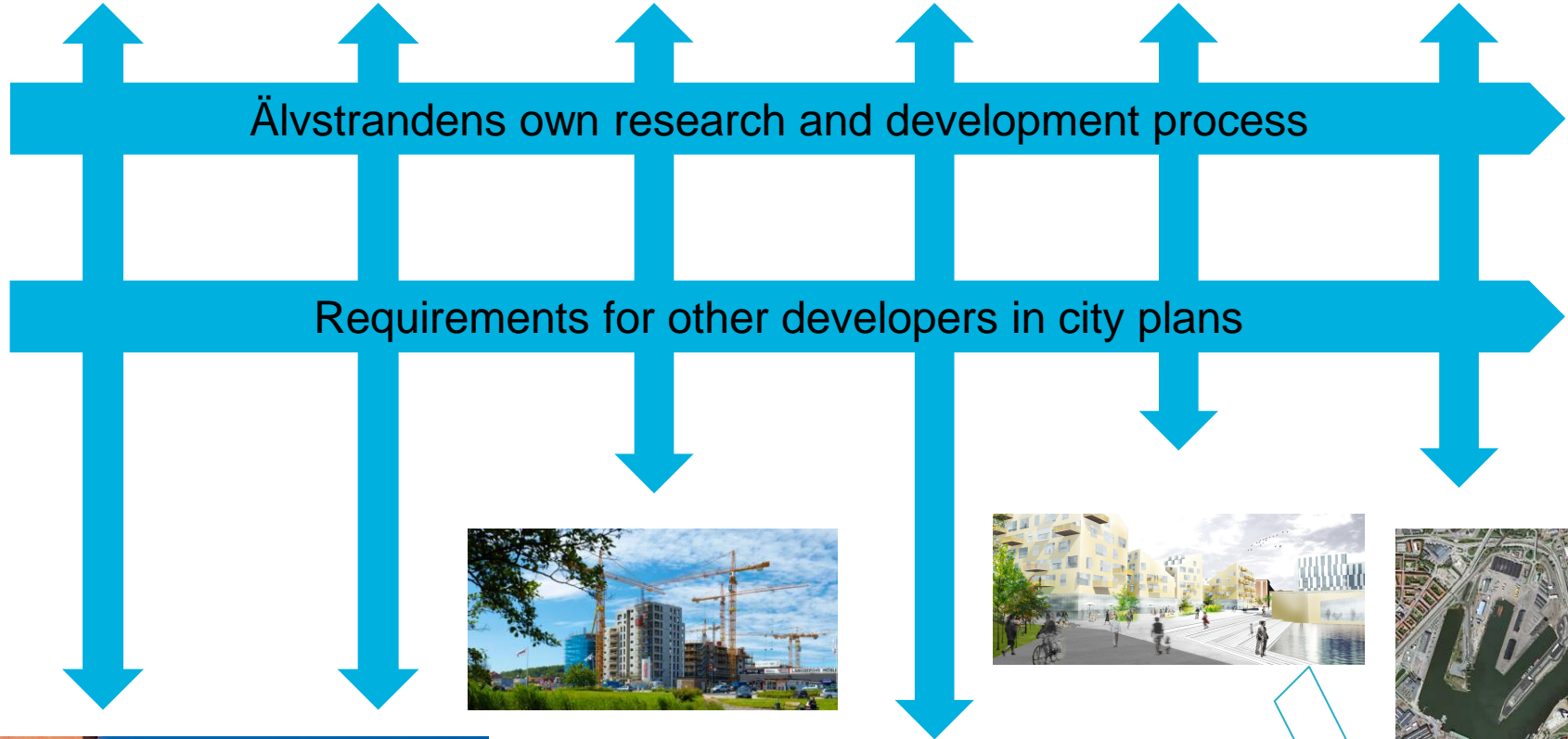
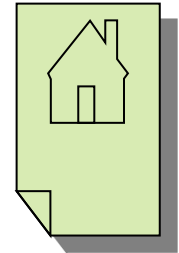
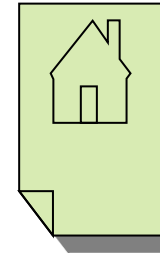
Help tools

Verification



Organization with a holistic approach



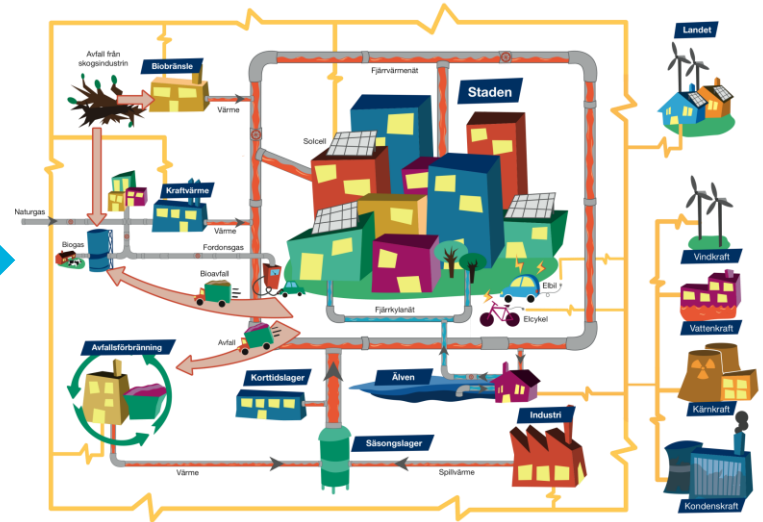
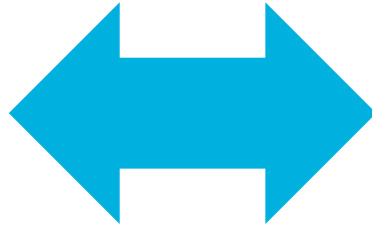


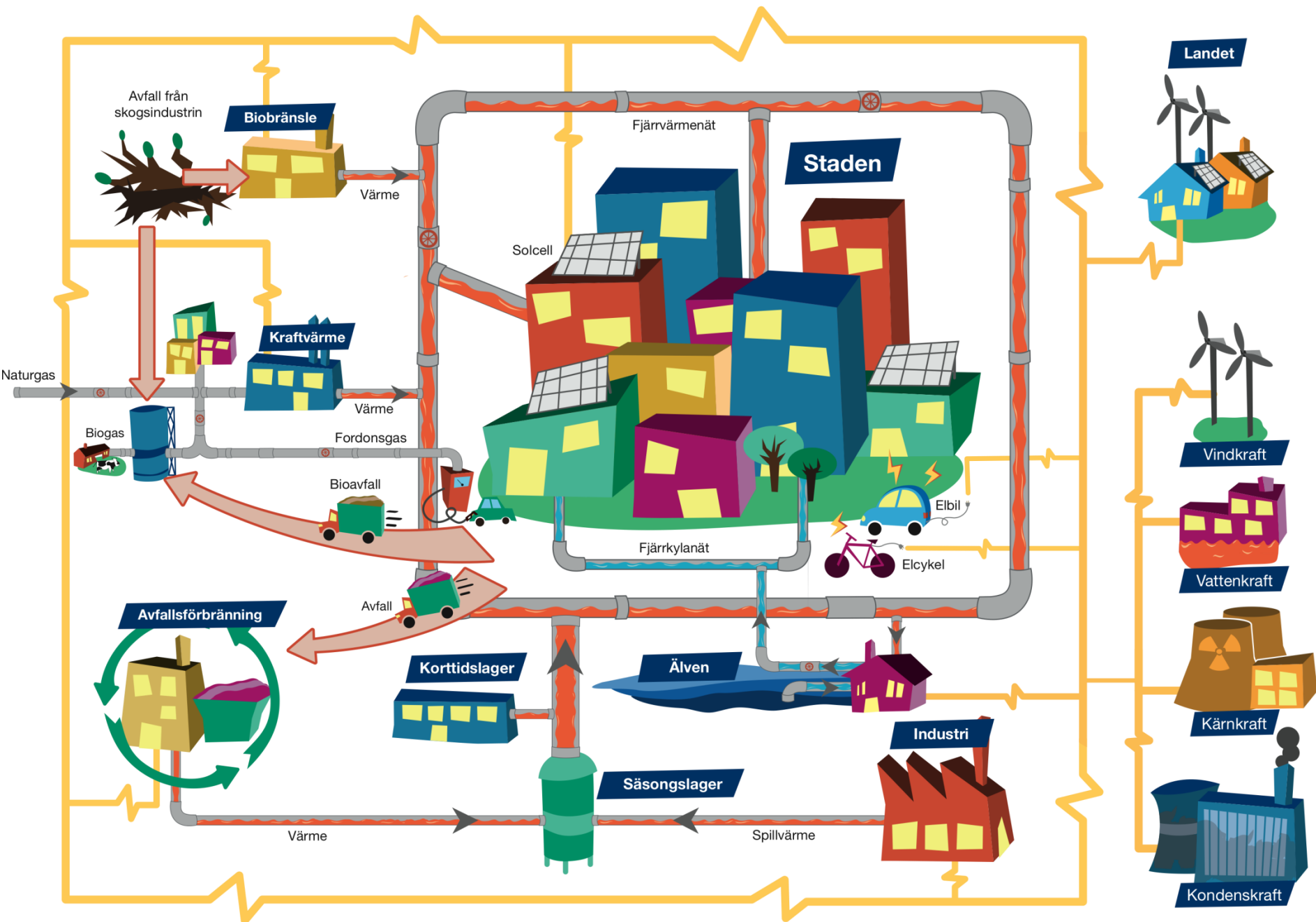
Challenges

- Collaboration & collaboration!
- It takes time! Let it take time!
- Build a process and organization that support sustainability
- The overall perspective is difficult to maintain in the entire process
- Have your own expertises
- Take decisions, have courage!
- Try, retry - learn! Do it again!
- Don't give up!



Next step – optimize for low CO₂!





A new approach in Lindholmshamnen



New requirements in the invitation

Invitation

- We described our vision and mission
- We described our basic requirements
- We wanted developers who had their own research and development, and who wanted to go further
- They were asked to describe their ambitions for the area's development
- We carefully selected developing companies
- Sustainability issues was the deciding factor





SKANSKA

PEAB
NORDENS SAMHÄLLSBYGGGARE



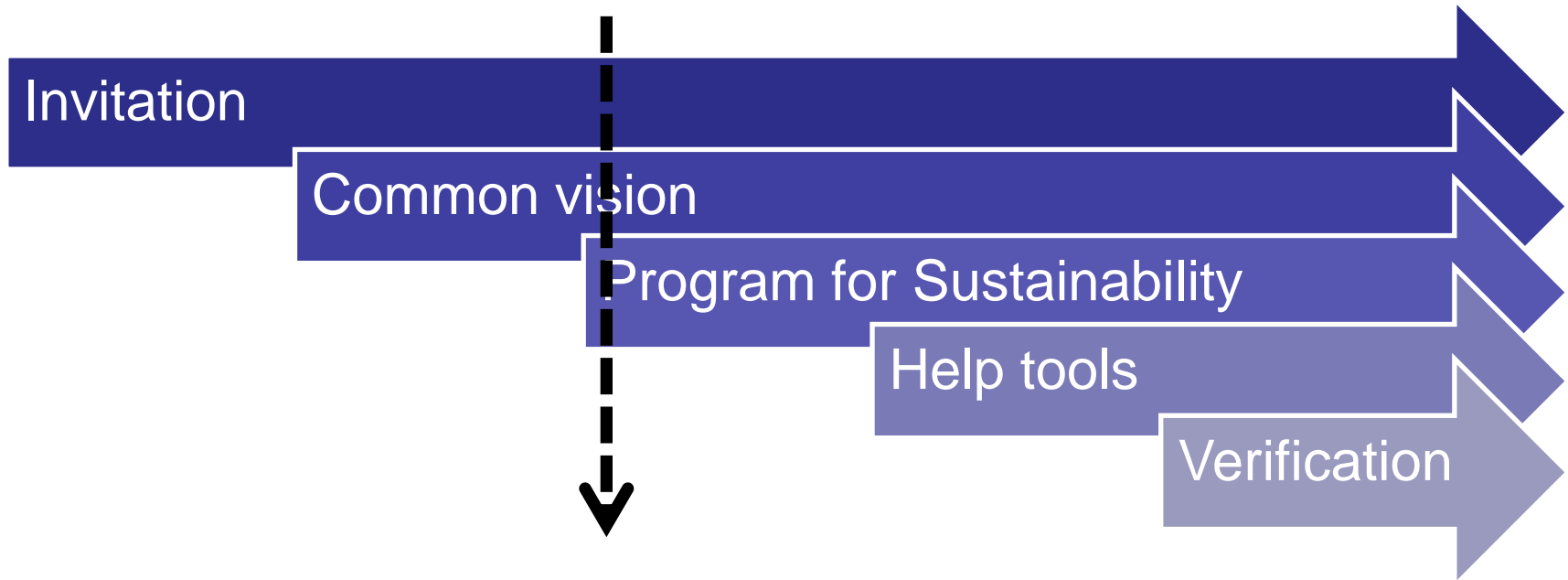


SKANSKA

PEAB
NORDENS SAMHÄLLSBYGGGARE



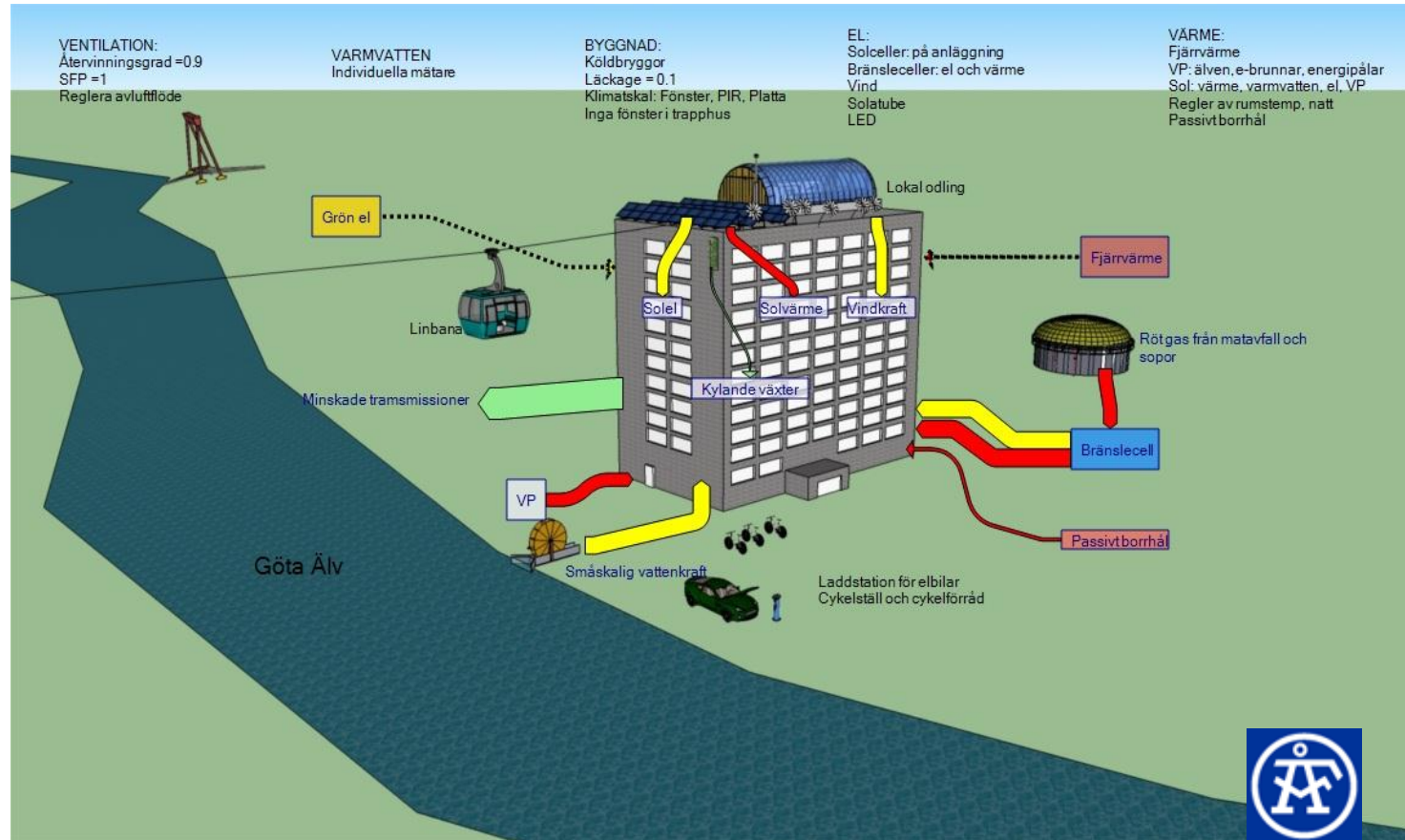
One examples of innovation



Assignment to two consultant teams:
energy design with a holistic approach

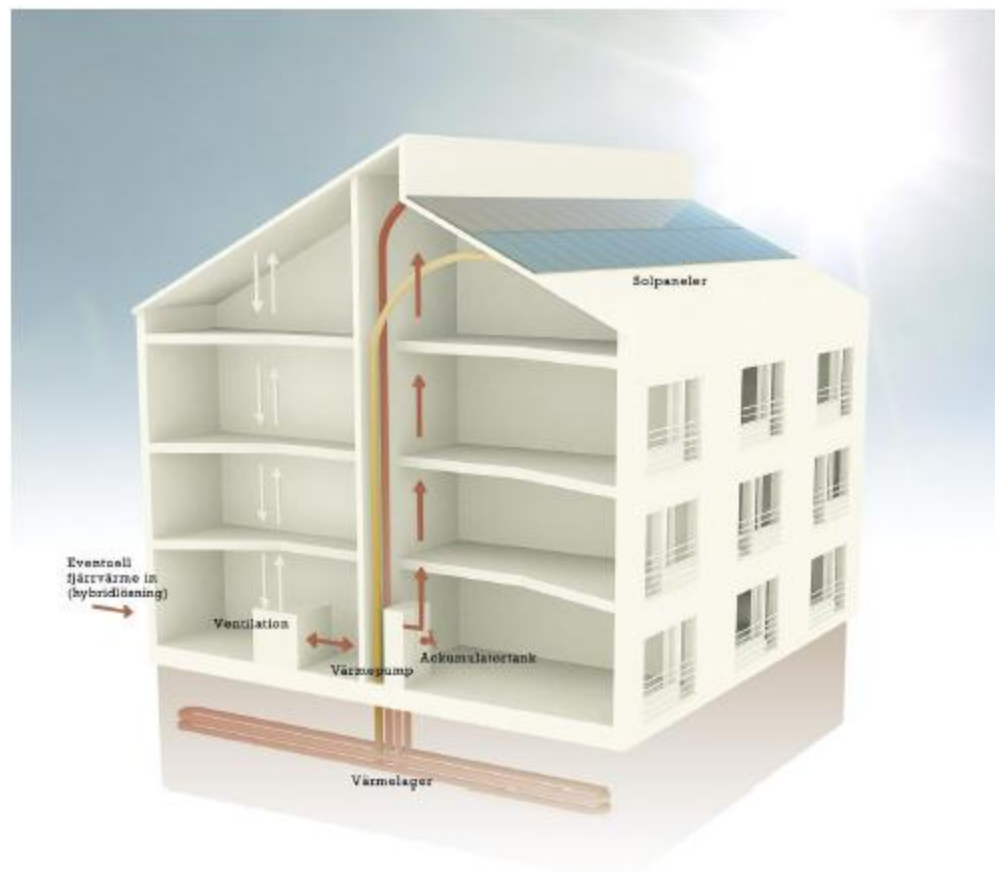


Some bold visions and combinations

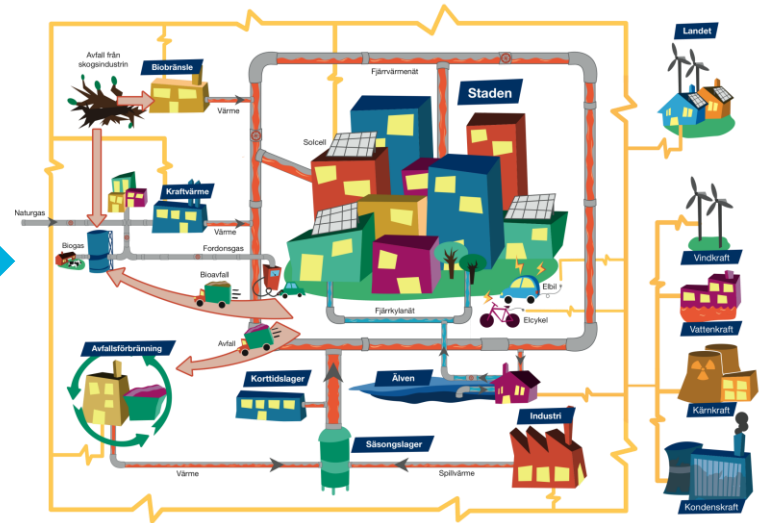
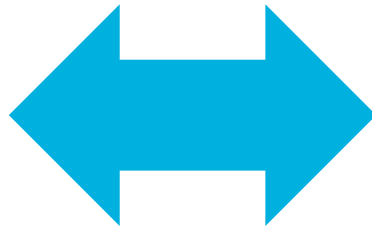


ASES - Active Solar Energy Storage

- Solfångare på taket
- Ackumulatortank
- Markvärmelager
- Värmepump
- Solen är leverantör av värme och varmvatten
- Värmepumpen arbetar med upp till COP 8



The most CO₂-efficient solution today



- Low energy buildings with district heating
- Short term energy storage in buildings
- Low return temperature to the system
- Large season energy storage in the system
- Unique for Gothenburg!



Challenges

- Focus in the invitation - what do you want to achieve?
- Be bold! Or gain nothing...
- Be open to new ideas – investigate, test and evaluate
- Build structures to transfer knowledge to the whole industry
- Involve less skilled developers and teach them?
- Save the world!



Thank you

Staffan Bolminger

031-779 96 35

staffan.bolminger@alvstranden.goteborg.se

@SBolminger

